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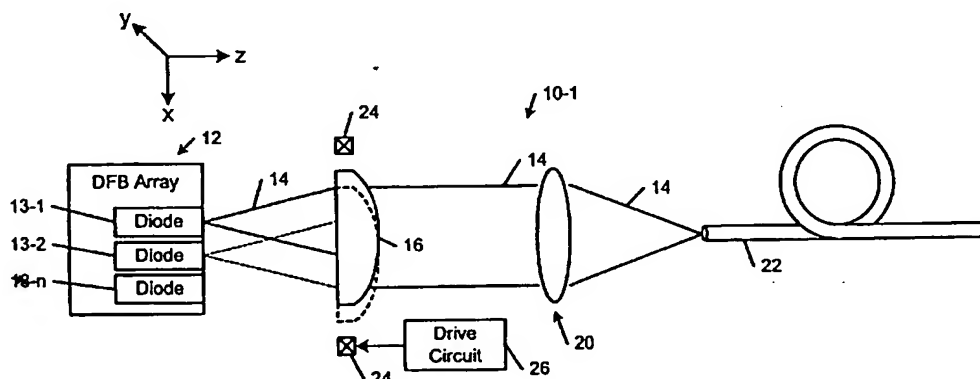
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ning of each regular issue of the PCT Gazette.

(54) Title: TUNABLE DISTRIBUTED FEEDBACK LASER



(57) Abstract: A wavelength tunable laser includes a distributed feedback (DFB) array with first and second DFB laser diodes that generates first and second beams of light in first and second wavelength ranges. A microelectromechanical (MEMS) optical element selectively couples one of the first and second beams of light from the DFB laser array into an optical waveguide. The MEMS optical element includes a collimating lens and a thermal or electrostatic MEMS actuator for moving the collimating lens to select the one of the first and second beams of light. A focusing lens is located between the collimating lens and the optical waveguide. Alternately, the MEMS optical element includes a fixed collimating lens that collimates the first and second beams of light, a mirror, and a MEMS actuator for tilting the mirror to select the one of the first and second beams of light.

## INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01S5/12 H01S5/40 H01S5/026

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01S 602B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 784 183 A (TANIWATARI TSUYOSHI ET AL) 21 July 1998 (1998-07-21)  column 8, line 7-20; figures 7,9 column 9, line 12-41; claim 1 ---	1,27,52, 67,81, 88,95, 98,101, 102
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 02, 29 February 2000 (2000-02-29) & JP 11 326707 A (MATSUSHITA ELECTRIC IND CO LTD), 26 November 1999 (1999-11-26) abstract  --- -/--	1,27,52, 67,95, 101

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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A	WO 95 13638 A (GERMANN ROLAND ;HAUSSER STEFAN (CH); VETTIGER PETER (CH); IBM (US)) 18 May 1995 (1995-05-18) page 8; figure 5A ----	1,27,81, 88,98, 102
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Information on patent family members

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